



TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Acting Secretary

March 19, 2010

Ms. Lee Anne Devine
Chief South Regulatory Section
U.S. Army Corps of Engineers – Louisville District
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202

Mr. Alan Grant
Kentucky Division of Water
200 Fair Oaks
Frankfort, Kentucky 40601

Subject: **Application for Section 404 NWP Permit &
Section 401 Water Quality Certification
KY 698 Realignment Project
Lincoln County, Kentucky
KYTC Item No: 8-141.00**

Dear Ms. Devine and Mr. Grant:

The Kentucky Transportation Cabinet respectfully submits this Application for a Section 404 Nationwide Permit & Section 401 Water Quality Certification for the KY 698 (Mason Gap Rd.) horizontal curvature correction and widening improvement in Lincoln County, Kentucky. The realignment project will result in unavoidable impact to an intermittent stream (see application).

Section 106 of the National Historic Preservation Act has been addressed through in-house consultation with KYTC professional staff. This project is federally funded and, as such, the Federal Highway Administration has addressed issues related to the NHPA. Attached for your consideration is correspondence from KYTC that indicates that the project will have No Adverse Effect on historic properties.

Section 7 of the Endangered Species Act (ESA) has been addressed through in-house consultation with KYTC subject matter experts. This project is federally funded and, as such, the Federal Highway Administration has addressed issues related to the ESA. Attached for your consideration is a copy of the endangered species list for Lincoln County, provided by USFWS, KDFWR and KSNPC. Indiana Bats have been addressed using the USFW Programmatic Biological Opinion on Indiana Bats by accounting for 1.76 acres using the Indiana Bat Conservation Fund.

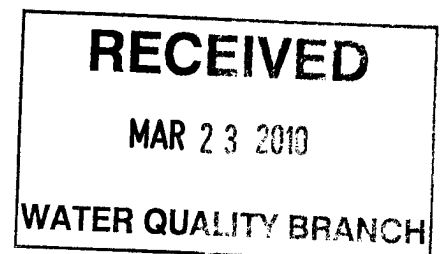
Enclosed you should find all necessary information in order to make a permit determination. If anything is missing that you need to assist you or you have any questions please contact me by email RoyC.Collins@ky.gov or by phone 502-564-7250.

Sincerely,

Roy Collins
Permit Coordinator



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SUMMARY OF SECTION 404 & 401 IMPACTS

Lincoln County
KY 698 (Mason Gap Road)
Item No. 8-141

1. **STA # 15+70** – Construct roadway impacting **416'** of an U.T. to Neal's Creek at approximately location : Latitude N 37°29'11" Longitude E 84°40'28". After construction this portion of the stream will be conveyed through culvert and constructed channel to connect the water flow. Field investigations indicate this stream is **intermittent** in nature with a watershed of approx. 40 acres. The impact to the water is **.03 acres**. (NWP #14 & Individual WQC)

Mitigation

KYTC respectfully request to mitigate for the impact of this project in the form of an in-lieu fee payment made into the Ky Dept. of Fish and Wildlife Resources in-lieu fee program. The stream is in poor condition with an intermittent flow regime which entails a 1:1 ratio. For 416' of stream impact KYTC proposes an in-lieu fee of \$49,920.

High Gradient Stream Data Sheet

STREAM NAME: <u>TRIB TO NEALS CREEK</u>		LOCATION: <u>8-141</u>		
STATION: <u>16+00</u>	DRAINAGE AREA (AC) <u>40</u>	BASIN/WATERSHED <u>KENTUCKY</u>		
LAT: <u>37°29'11"</u> LONG: <u>84°40'28"</u>		COUNTY: <u>LINCOLN</u> USGS 7.5 TOPO: <u>HALLS GAP</u>		
DATE: <u>3/3/10</u> TIME: <u>3:00</u> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		INVESTIGATORS:		
TYPE SAMPLE: <input type="checkbox"/> P-CHEM <input type="checkbox"/> Macroinvertebrate <input type="checkbox"/> FISH <input type="checkbox"/> BACT.				
WEATHER: Now Past 24 hours Has there been a heavy rain in the last 7 days? <input type="checkbox"/> <input type="checkbox"/> Heavy rain <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/> Steady rain Air temperature _____ °F. Inches rainfall in past 24 hours _____ in <input type="checkbox"/> <input type="checkbox"/> Intermittent showers <u>95</u> % Cloud Cover <input type="checkbox"/> <input type="checkbox"/> Clear/sunny				
P-Chem: Temp (°F) _____ D.O. (mg/l) _____ % Saturation _____ pH(S.U.) _____ Cond.µs _____ <input type="checkbox"/> Grab				
INSTREAM WATERSHED FEATURES Stream Width EOW <u>3</u> ft Stream Width BF <u>7</u> ft Range of Depth <u>3</u> ft Bank Full Depth <u>3.5</u> ft Est. Reach Length _____ ft		LOCAL WATERSHED FEATURES: Predominant Surrounding Land Use: <input type="checkbox"/> Surface Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Deep Mining <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Pasture/Grazing <input type="checkbox"/> Oil Wells <input type="checkbox"/> Industrial <input type="checkbox"/> Silviculture <input type="checkbox"/> Land Disposal <input type="checkbox"/> Row Crops <input type="checkbox"/> Urban Runoff/Storm Sewers		
Hydraulic Structures: Stream Flow; Stream Type; <input type="checkbox"/> Dams <input type="checkbox"/> Bridge Abutments <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input checked="" type="checkbox"/> Low <input type="checkbox"/> Normal <input type="checkbox"/> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Island <input type="checkbox"/> Waterfalls <input type="checkbox"/> High <input type="checkbox"/> Very Rapid or Torrential <input type="checkbox"/> Ephemeral <input type="checkbox"/> Seep <input type="checkbox"/> Other <input checked="" type="checkbox"/> Culverts				
Riparian Vegetation: Dominate Type: <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous Number of Strata _____		Dom. Tree/Shrub Taxa Canopy Cover; <input type="checkbox"/> Fully Exposed (0-25%) <input checked="" type="checkbox"/> Partially Exposed (25-50%) <input type="checkbox"/> Partially Shaded (50-75%) <input type="checkbox"/> Fully Shaded (75-100%)		
Channel Alterations; Dredging <input type="checkbox"/> Channelization (<input type="checkbox"/> Full <input checked="" type="checkbox"/> Partial) <u>CULVERT</u>				
Substrate <input checked="" type="checkbox"/> Est. <input type="checkbox"/> P.C. Riffle _____ % Run; _____ % Pool _____ %				
Silt/Clay (<0.06 mm)				
Sand (0.06-2 mm)				
Gravel (2-64 mm) <u>/</u>				
Cobble (64-256 mm)				
Boulders (>256 mm)				
Bedrock				
Habitat	Condition Category			
Parameter	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient.	40-70% mix of stable habitat; well suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat" lack of habitat is obvious; substrate unstable or lacking.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 7 6	5 4 3 2 1 0
2. Embeddedness	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
SCORE	20 19 18 17 16	15 14 13 12 <u>11</u>	10 9 8 7 6	5 4 3 2 1 0
3. Velocity/Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow. Deep > 1.5 feet.	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes)	Only 2 of the 4 habitat regimes present (if fast-shallow or slow shallow are missing, score low)	Dominated by 1 velocity/depth regime.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	<u>5</u> 4 3 2 1 0

4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills > 75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 7 6	5 4 3 2 1 0
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40-80% of stream reach channelized and disrupted.	Banks shored with gabion of cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 <u>12</u> 11	10 9 8 7 6	5 4 3 2 1 0
7. Frequency of Riffles	Occurrence of riffles relatively frequent; spacing between riffles 5 to 7 stream widths. Variety of habitat is key. In streams where riffles are continuous, boulders or logs are important.	Occurrence of riffles infrequent; distance between riffles divided by stream width is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by stream width is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by stream width is > than 25.
SCORE	20 19 18 17 <u>16</u>	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable, infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable, 30-60% of bank in reach has areas of erosion, high erosion potential during floods.	Unstable, many eroded areas, "raw" areas frequently along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 <u>1</u> 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 <u>1</u> 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruptive of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	<u>2</u> 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	<u>2</u> 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone).	Width of riparian zone > 18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.
SCORE (LB)	Left Bank 10 9	8 7 6	<u>5</u> 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 <u>1</u> 0

Total Score

80

NOTES/COMMENTS;

MEMORANDUM

TO: CENTRAL FILES
DIVISION OF ENVIRONMENTAL ANALYSIS

FROM: CARL R. SHIELDS
ARCHAEOLOGIST
DIVISION OF ENVIRONMENTAL ANALYSIS

SUBJECT: ARCHAEOLOGY
PROPOSED KY 698 WIDENING AND RECONSTRUCTION
LINCOLN COUNTY, KY
KYTC ITEM NUMBER: 8-141.00

DATE: October 22, 2007

On October 9, 2007, a Phase I archaeological survey was conducted on the subject project (see attached). This work entailed pedestrian survey. The majority of the project consists of very steep slopes. Some areas outside the existing right-of-way, but within the project area, are highly disturbed by utility construction.

No cultural artifacts were recovered and no intact cultural deposits were identified during this survey. Therefore, this area contains no archaeological sites eligible for the National Register of Historic Places (NRHP). This project is cleared archaeologically.

If the project plans change, additional archaeological survey may be required. If human remains are accidentally discovered or a previously unidentified archaeological site is encountered, work must cease and this office notified immediately.

Cc w/ attachment:

Randall Thomas
Cathi Blair (District 8)
James Hixon
Reading Files
Archaeology Files



Kentucky Transportation Cabinet

HABITAT ASSESSMENT

KYTC Item No: 8 - 141 Route: Ky 698

Quadrangle(s): Halls Gap County(les): Lincoln

Project Description:

Project will include the widening and slight realignment of the current Ky 698. The project begins at the Water Treatment Plant Road and extends southwest to Mason Gap Road. This road is utilized by several large garbage trucks that are hauling to the Tri-K Landfill which is located on Mason Gap. The large volume of truck traffic, steep inclines, narrow lanes and virtually non-existent shoulders create a safety issue for vehicles along this section of Ky 698.

Listed Species: (Attach copy of USFWS county list, KSNPC web site and KDFWR web site)

Myotis sodalis (Indiana bat), *Myotis grisescens* (gray bat) listed on the USFWS county list; *Villosa trabilis* (Cumberland bean pearly mussel) listed on the USFWS county list, the KDFWR web site and the KSNPC web site; and *Pleurobema clava* (clubshell mussel) listed on the KSNPC web site.

Methodologies:

Field surveys were conducted by Zack Couch, DEA in 2006 and Cathi Blair, D8 EC in July 2007. Topographic maps, wetland maps, aerial photos and GIS were all reviewed in the District office.

Results:


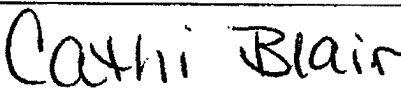
Both mussel species require perennial streams for habitat. This project does not cross any perennial streams therefore there is no habitat present for the mussel species. Also the *Villosa trabilis* is a Cumberlandian mussel and this project is not in the Cumberland River watershed.

No cave systems, bridges, mine openings or tunnels are located in the project area so therefore there is no gray bat habitat/roosting area in the project area. This project will not directly impact any streams with wooded banks or open water wetlands so therefore no potential foraging corridors are impacted.

The project will impact some acreage that contains potential summer roosting habitat for the Indiana bat. The District concludes that there this project "May Affect" Indiana bat habitat and therefore a contribution to the Indiana Bat Conservation fund will be made based on the total acreage of potential IB habitat affected.

Determinations:

The project has been assessed in accordance with the provisions of Section 7 of the Endangered Species Act, and KYTC concludes that the project will have No Effect on *Villosa trabilis*, *Pleurobema clava*, or *Myotis grisescens* or their critical habitat and that further consultation with the Service for these species is not required.

			7-27-07	
	KYTC Signature		Date	
				
	Print Name			
	Oracle SYP Milestone Updated	Cathi Blair	7-27-07	
		Name	Date	



Indiana Bat Conservation Fund

Commitment for Use of Take

Item No.: 8 - 141

Route: KY 698

County: Lincoln

Description of project areas requiring "take":

Woodland area south-southwest of existing highway between mile markers 10.61 - 10.76.

Amount of Take: 1.76 acres trees Mean Land Cost/ac: \$ 3000
(amount) (amount)

Anticipated Value of Take: \$ 1056.00 → \$ 1003.2

Attachments: ☒ Maps ☒ Photographs ☒ Other: Project w/ calculated acreage

The amount listed above has been determined in accordance with the Programmatic Biological Opinion issued by the US Fish and Wildlife Service June 9, 2006, any subsequent amendments thereto, and the KYTC Habitat Assessment Manual.

Jami West, DEC
(Name of Biologist or DEC)

Jami West
Signature

12/4/09
1/29/10
Date

As Project Manager, I understand that this authorization for use of the IBCF represents an irretrievable commitment for the referenced project. Furthermore, I acknowledge that Design funds are available for immediate payment of this expense.

Kim Roberts
(Name of Project Manager)

Kim Roberts
Signature

12/4/09
1/29/10
Date

Following completion, route form to Ecology and Permitting Branch Manager, Division of Environmental Analysis

FOR DEA USE ONLY

Approved: 12/4/09 W. L. Z. P.
Date Signature

☒ All appropriate entries to reflect use of the take have been entered into the Environmental Analysis Tracking System.

Reported to USFWS: 1/29/10 W. L. Z. P.
Date Signature

**Report of
Endangered, Threatened, and Special Concern
Plants, Animals, and Natural Communities
for Lincoln County, Kentucky**

**Kentucky State Nature Preserves
Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)**

www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission

Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

STATUS

KSNPC: Kentucky State Nature Preserves Commission status:

N or blank = none E = endangered T = threatened S = special concern H = historic X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none C = candidate LT = listed as threatened LE = listed as endangered

SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

G1 = Critically imperiled

G2 = Imperiled

G3 = Vulnerable

G4 = Apparently secure

G5 = Secure

GH = Historic, possibly extinct

GX = Presumed extinct

GU = Unrankable

G#? = Inexact rank (e.g. G2?)

G#Q = Questionable taxonomy

G#T# = Intraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species)

GNR = Unranked

GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently secure

S5 = Secure

SH = Historic, possibly extirpated

SX = Presumed extirpated

SU = Unrankable

S#? = Inexact rank (e.g. G2?)

S#Q = Questionable taxonomy

S#T# = Intraspecific taxa

SNR = Unranked

SNA = Not applicable

Migratory species may have separate ranks for different population segments (e.g. S1B, S2N, S4M):

S#B = Rank of breeding population

S#N = Rank of non-breeding population

S#M = Rank of transient population

COUNT DATA FIELDS

OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county

H - reported from the county but not seen for at least 20 years

F - reported from county & cannot be relocated but for which further inventory is needed

X - known to have extirpated from the county

U - reported from a county but cannot be mapped to a quadrangle or exact location.

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky
Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Lincoln	Vascular Plants	<i>Bouteloua curtipendula</i>	Side-oats Grama	S /	G5 / S3?	2	0	0	0	0
Lincoln	Vascular Plants	<i>Calopogon tuberosus</i>	Grass Pink	E /	G5 / S1	0	2	0	0	0
Lincoln	Vascular Plants	<i>Carex crawei</i>	Crawe's Sedge	S /	G5 / S2S3	1	0	0	0	0
Lincoln	Vascular Plants	<i>Carex tetanica</i>	Rigid Sedge	E /	G4G5 / S1?	1	0	0	0	0
Lincoln	Vascular Plants	<i>Hydrophyllum virginianum</i>	Eastern Waterleaf	T /	G5 / S2?	1	0	0	0	0
Lincoln	Vascular Plants	<i>Lespedeza capitata</i>	Round-head Bush-clover	S /	G5 / S3	1	0	0	0	0
Lincoln	Vascular Plants	<i>Lonicera prolifera</i>	Grape Honeysuckle	E /	G5 / S1	1	0	0	0	0
Lincoln	Vascular Plants	<i>Onosmodium hispidissimum</i>	Hairy False Gromwell	E /	G4G5T4 / S1	1	0	0	0	0
Lincoln	Vascular Plants	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses	T /	G4 / S2	1	0	0	0	0
Lincoln	Vascular Plants	<i>Viola septemloba</i> var. <i>egglestonii</i>	Eggleston's Violet	S /	G4 / S3	2	0	0	0	0
Lincoln	Freshwater Mussels	<i>Pleurobema clava</i>	Clubshell	E / LE	G2 / S1	0	0	0	1	0
Lincoln	Freshwater Mussels	<i>Simpsonaias ambigua</i>	Salamander Mussel	T / SOMC	G3 / S2S3	0	0	2	0	0
Lincoln	Freshwater Mussels	<i>Toxolasma lividus</i>	Purple Lilliput	E / SOMC	G2 / S1	0	0	1	0	0
Lincoln	Freshwater Mussels	<i>Villosa lienosa</i>	Little Spectaclecase	S /	G5 / S3S4	0	0	6	2	0
Lincoln	Freshwater Mussels	<i>Villosa trabalis</i>	Cumberland Bean	E / LE	G1 / S1	0	0	1	0	0
Lincoln	Fishes	<i>Noturus stigmosus</i>	Northern Madtom	S / SOMC	G3 / S2S3	0	1	0	0	0
Lincoln	Breeding Birds	<i>Passerculus sandwichensis</i>	Savannah Sparrow	S /	G5 / S2S3B,S2S3 N	1	0	0	0	0
Lincoln	Communities	<i>Knobs shale barrens</i>		/	GNR / S2S3	1	0	0	0	0
Lincoln	Communities	<i>Limestone barrens</i>		/	GNR / S2	1	0	0	0	0
Lincoln County Total:						14	3	10	3	0

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)
email: naturepreserves@ky.gov
internet: www.naturepreserves.ky.gov



Species Information

Federal Threatened, Endangered, and Candidate Species observations for selected counties

Linked life history provided courtesy of [NatureServe Explorer](#).

Records may include both recent and historical observations.

[US Status Definitions](#) [Kentucky Status Definitions](#)

List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.

Selected county is: Lincoln.

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
Villosa trabalis	Cumberland Bean	Bivalvia	Lincoln	LE, XN	E	Yes	Reference

1 species are listed



U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
330 West Broadway, Rm 265
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate
Species in LINCOLN County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	<i>Myotis sodalis</i>	Indiana bat	E	P	
	<i>Myotis grisescens</i>	gray bat	E	P	
Mussels	<i>Villosa trabilis</i>	Cumberland bean pearlymussel	E	K	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.